

Patent Claims:

1 1. Arrangement for the torque measurement of rotating machine
2 parts with a strain measuring bridge (2) arranged on the
3 rotor, the output signals of which strain measuring bridge
4 are amplified and converted in a voltage-frequency
5 converter (4) into a frequency-proportional signal and are
6 transmitted by means of a transmitter circuit (9) to a
7 stator, characterized in that the voltage-frequency
8 converter (4) is embodied as a synchronous
9 voltage-frequency converter, after which a follow-up
10 synchronization circuit (PLL) (6) is circuit-connected for
11 the suppression of the so-called frequency jitter.

1 2. Arrangement for the torque measurement according to
2 claim 1, characterized in that the synchronous
3 voltage-frequency converter (4) is driven with a high
4 quartz-controlled frequency, which comprises a multiple of
5 the required carrier frequency, which is provided for a
6 prescribed signal bandwidth, whereby the follow-up
7 synchronization circuit (PLL) (6) is followed by a
8 frequency divider circuit (10), which divides down the
9 output frequency by the multiple.

1 3. Arrangement for the torque measurement according to
2 claim 2, characterized in that the synchronous
3 voltage-frequency converter (4) is arranged on the rotor
4 side (14), while the follow-up synchronization circuit

5 (PLL) (6) is provided on the stator side (13), whereby the
6 quartz frequency is produced on the stator side (13) and is
7 inductively transmitted in a synchronized manner to the
8 rotor side (14) with the aid of the transmitter circuit
9 (12) and is supplied to the synchronous voltage-frequency
10 converter (4).